12-1989

The 1989 Iowa Corn Yield Test Report, District 5

K.E. Ziegler
Iowa State University

W.H. Vinson
Iowa State University

D.E. Carroll
Iowa State University

The 1989 Iowa Corn Yield Test Report, District 5

Abstract

Results of the Iowa Com Yield Test are published to aid Iowa farmers in selecting com hybrids. This is the seventieth consecutive year for the test. The presentation of data for the hybrids tested does not imply approval or endorsement by the authors or by the agencies sponsoring or conducting the test. Entries in tables I and 2 are designated by brand name and variety.

Disciplines

Agriculture

IOWA STATE UNIVERSITY

AGRONOMY
• Crops
• Soils
• Climate

THE 1989 IOWA CORN YIELD TEST REPORT

District 5

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn hybrids. This is the seventieth consecutive year for the test.

The presentation of data for the hybrids tested does not imply approval or endorsement by the authors or by the agencies sponsoring or conducting the test. Entries in tables 1 and 2 are designated by brand name and variety.

1989 Procedure

Producers of corn seed and Iowa State University were eligible to enter varieties in the Iowa Corn Yield Test. Each producer was allowed a maximum of six paid entries per district. All entries had to be available in a quantity of at least 10 bushels of seed.

Two hundred twenty-five entries were evaluated in this district. Fifteen of the entries determined to be widely grown were entered by Iowa State University. In June, of even numbered years, approximately 21,000 survey cards are mailed in the state. Recipients of these cards are determined by a random drawing of names from land owners listed in the county plat books. Based on the survey results, the 15 hybrids grown on the most acres in the district are classified as widely grown for that district. The widely grown hybrids (*) in this report were determined by the 1988 survey. Iowa State University entered a maximum of three widely grown hybrids of any given brand. These entries were given priority over the remaining 210 entries made by seed producers.

Each entry was replicated four times in four-row plots at a planting rate of 28,000 kernels per acre at each location. All locations were machine-planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot, and yields were corrected to 15.5 percent moisture for shelled corn.

Starting with the 1988 report, data for protein, oil, and starch percentages are included in the Iowa Corn Yield Test Report. Protein, oil, and starch were measured on a near-infrared reflectance analyzer that was calibrated against accepted chemical methods. Dr. Charles R. Hurburgh, Jr. of the Department of Agricultural Engineering at Iowa State University is responsible for analyzing the samples. Samples for nutrient analysis were collected from one field in each district. Data presented are averages of the four replicated plots in that field. To be consistant with the yield data, the protein, oil, and starch data were corrected to 15.5 percent moisture.

How Information Is Presented

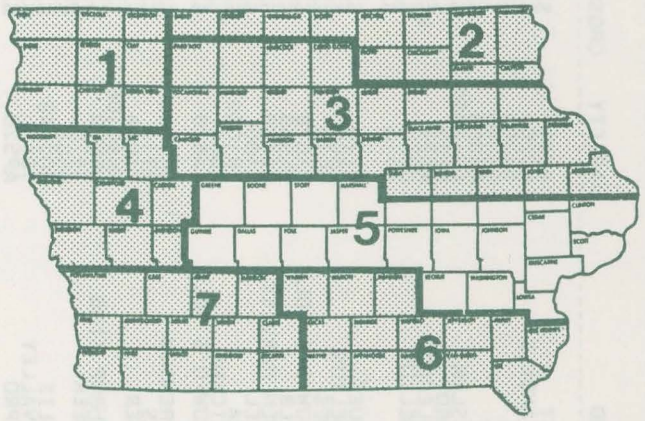
The agronomic data presented are averages of three locations in 1988 and two locations in 1987 and 1989. Yield in bushels per acre and percentage of moisture, root lodging, stalk lodging, dropped ears, stand, protein, oil, and starch are shown for all entries tested in 1989 and for those tested in 1987 and 1988 that were in the 1989 test.

Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values for yield shown in tables 1 and 2 represent, in bushels per acre, the amounts of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in tables 1 and 2 are indications of maturity and natural drying rate. Maturity of varieties entered generally ranged from early to full season. Yield comparisons should be made among varieties of similar maturity.

It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years indicate stable performance. Supplemental yield and agronomic information about specific varieties may be obtained from your seed corn dealers and from neighbors who have grown these varieties.



Prepared by K. E. Ziegler, W. H. Vinson, and D. E. Carroll, instructor in agronomy and technicians.

Cooperative Extension Service,
Agriculture and Home Economics Experiment Station,
Iowa Crop Improvement Association, and the
United States Department of Agriculture cooperating

IOWA STATE UNIVERSITY
EXTENSION
Ames, Iowa 50011
Pm-660-5-89 | December 1989

Protein, oil, and starch percentages (table 1) are quality attributes important to many of the different end-users of corn. While these factors are not currently measured at corn markets, there is great interest in expanding the U.S. grain grading system to be more end-user oriented. These data are being reported because compositional analysis provides factors of economic importance to a wide range of corn end-users. Livestock feeders may want to utilize the compositional information in selecting hybrids to plant for feed use. For feed, protein will be of primary interest; for processing uses, oil and starch content are of importance. The protein percentage data reported are measures of crude protein and may not give an accurate indication of feed value if feed rations are balanced on individual amino acids rather than crude protein content.

1989 Field Data

The District 5 test was conducted on farms operated by Don Gardner near Ogden in Boone County, Curtis Ferneau near Grinnell in Poweshiek County, and Dick Elijah near Clarence in Cedar County. The Cedar County location was not harvested because of a large amount of variability resulting from herbicide carryover. Field data for the other two locations are presented in table A.

Subsoil moisture for the district at planting time was somewhat below normal while the topsoil moisture was short at some locations. Rainfall was well below normal in April and June, below normal in May and July, and above normal in August and September. Temperatures were well below normal in May, June, and September, below normal in April and August, and above normal in July. The average district yield was 6 bushels per acre below the mean of the five preceding years' averages. Average location yields are listed in table A.

Other Reports

Separate reports for variety performance are available for each district shown in figure 1. These publications are available at your county extension office or from Publications Distribution, Printing and Publications Building, Iowa State University, Ames, Iowa 50011. Also, an IBM compatible diskette containing these data along with a hybrid selection program is available from Extension Software Services, 108 Atanasoff Hall. Iowa State University, Ames, IA 50011. The cost of this diskette is $15. All seven districts can be purchased for $100. When ordering, along with the payment, indicate diskette size, 5¼ or 3½, and district(s) wanted. Order forms are available from county extension offices.

The 1989 Iowa Corn Yield Test Report:
Pm-660-1-89 District 1
Pm-660-2-89 District 2
Pm-660-3-89 District 3
Pm-660-4-89 District 4
Pm-660-5-89 District 5
Pm-660-6-89 District 6
Pm-660-7-89 District 7

File: Agronomy 1

Cooperative Extension Service, Iowa State University of Science and Technology and the United States Department of Agriculture cooperating. Ronald C. Powers, interim director, Ames, Iowa. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914.

District 5
Designations Identifying Brands in the Yield Test

AG SERVICES	Ag Services of America, Inc., Cedar Falls, IA 50613
AGRIGENE	Agrigene Seed Research, Des Moines, IA 50322
*AGRIPRO	AgriPro, Tekemah, NE 68061
AMERICANA	Americana Seeds Inc., Bowen, IL 62316
AMES BEST	Ames Best Hybrids, Ames, IA 50010
*ASGROW/O'S GOLD	Asgrow Seed Company, Des Moines, IA 50322
BOJAC	BoJac Hybrid Company, Mt. Pulaski, IL 62548
CARGILL	Cargill Seeds, Minneapolis, MN 55440
COOP	Cooperative Seeds, Inc., Alta, IA 51002
CORNELIUS	Cornelius Seed Corn Co., Bellevue, IA 52031
*CROWS	Crows Hybrid Corn Co., Milford, IL 60953
DAIRYLAND	Dairyland Seed Co., Inc., West Bend, WI 53095
*DEKALB	Dekalb Pfizer Genetics, DeKalb, IL 60115
EK PREMIUM	EK Premium, Berwick, IL 61417
FEDERAL	Federal Hybrids, Marion, IA 52302
FONTANELLE	Fontanelle Hybrids, Nickerson, NE 68044
FS	Growmark, Inc., Bloomington, IL 61702
FUNK	Ciba-Geigy Seed Division, Greensboro, NC 27419-8300
*GARST	Garst Seed Co., Slater, IA 50244
GOLDEN HARVEST	ROB-SEE-CO Golden Harvest, Waterloo, NE 68069
GOLDEN HARVEST	Golden Seed Co. Inc., Cordova, IL 61242
GREAT LAKES	Great Lakes Hybrids, Inc., Ovid, MI 48866
GRUHN HYBRID	Gruhn Hybrids, Manilla, IA 51454
HAWKEYE HYBRID	Hawkeye Hybrids, Inc., Pella, IA 50219
HENKEL	Henkel Seeds, Mendota, IL 61342
HUGHES	Hughes Hybrids, Woodstock, IL 60098
IOWA STATE	Ralph Mathis, Elkhart, IA 50073
JACQUES	Jacques Seed Company, Prescott, WI 54021
KRUGER	Kruger Seed Company, Dike, IA 50624
LEWIS	Lewis Hybrids, Inc., Ursa, IL 62376
LYNKS	Lynks Seeds, Marshalltown, IA 50158
MARK	Mark Seed Co., Perry, IA 50220
MCALLISTER	McAllister Seed Co., Inc., Mt. Pleasant, IA 52641
MCCURDY	McCurdy Seed Co., Fremont, IA 52561
*MIDDLEKOOP	Middlekoop Seed Corn Inc., Packwood, IA 52580
NC+	NC+ Hybrids, Lincoln, NE 68504
*NORTHRUP KING	New Northrup King Co., Ames, IA 50010
OTTILIE	Ottilie R. O. Seed, Marshalltown, IA 50158
PAYCO	Payco Seeds, Inc., Dassel, MN 55325
PFISTER	Pfister Hybrid Corn Co., El Paso, IL 61738
*PIONEER	Pioneer Hi-Bred International, Inc., Ankeny, IA 50021
RANDELL	Randell Seed Co., Inc., Cedar, IA 52543
RENZE	Renze Hybrids, Inc., Carroll, IA 51401
S BRAND	Schechinger Seed Co., Harlan, IA 51537
SHISSLER	Shissler Seed Co., Elmwood, IL 61529
SIEBEN	Sieben Hybrids, Inc., Geneseo, IL 61254
STURDY GROW	Sturdy Grow Hybrids, Inc., Arcola, IL 61910
SU CROS CO	Su Cros Co. Inc., Manilla, IA 51454
SUPER CROST	Edward J. Funk & Sons, Inc., Kentland, IN 47951
SUPERIOR	Superior Hybrids Co., Inc., North Bend, NE 68649
TERRA	Terra Seed and Genetics, Lima, OH 45804
TRI VALLEY	Tri Valley Seed, Council Bluffs, IA 51501
UTHOFF	Uthoff Hybrids, Cedar Rapids, IA 52404
WILSON	Wilson Hybrids, Inc., Harlan, IA 51537
WYFFELS	Wyffels Hybrids, Inc., Atkinson, IL 61235

*Companies with one or more widely grown entries made by Iowa State University.

Table A. Field Data

	Gardner Farm Clarion loam			Ferneau Farm* Tama silty clay loam		
Fertilizer applied, lb.	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Plowdown	31	80	100	150	40	120
Preplant	110	—	—	—	—	—
TOTAL	141	80	100	150	40	120
1988 crop	Soybeans			Soybeans		
Row width	30 inches			30 inches		
Planting date	May 5			April 24		
Harvest date	Oct. 18 & 19			Oct. 16 & 17		
Average yield	132 bu/a			148 bu/a		

*Field sampled for protein, oil, and starch percentage data.

TABLE 1. AVERAGE PERFORMANCE OF VARIETIES TESTED IN DISTRICT 5. 28,000 PLANTING RATE. LSD FOR 1989 YIELD IN BUSHELS IS 15.

1989 PROTEIN PCT LSD = 0.5. 1989 OIL PCT LSD = 0.3. 1989 STARCH PCT LSD = 1.0.

BRAND	VARIETY	CROSS	YIELD BU/A			MOISTURE PCT			ROOT LDG PCT			STALK LDG PCT			DROP EAR PCT			STAND PCT			PROTEIN PCT			OIL PCT			STARCH PCT			VARIETY	BRAND
			1987	1988	1989	1989	1988	1987	1989	1988	1987	1989	1988	1987	1989	1988	1987	1989	1988	1987	1989	1988	1987	1989	1988	1987	1989	1988	1987		
GARST	8599	SX			137	15.8			2			5			0			82			8.6			3.2			59.6			8599	GARST
FONTANELLE	4035	SX			134	16.0			2			5			0			80			8.8			3.4			59.8			4035	FONTANELLE
FUNK	G4309	SX			135	16.0			3			5			1			86			7.8			3.4			60.2			G4309	FUNK
FUNK	G4385	SX			149	16.1			2			1			1			88			7.9			3.4			60.6			G4385	FUNK
FUNK	G4393	SX			136	16.1			2			3			0			86			8.0			3.5			60.8			G4393	FUNK
SHISSLER	LG-2550	SX			135	16.1			2			2			1			88			8.2			3.6			60.7			LG-2550	SHISSLER
MCCURDY	5222	SX			127	16.3			22			4			0			86			8.6			3.5			60.0			5222	MCCURDY
MIDDLEKOOP	M622	MSX	146	87	108	16.5	18.1	16.5	23	0	2	7	1	4	0	0	1	87	86	89	8.6	7.5	8.6	3.6	3.6	3.5	59.9	60.7	60.0	M622	MIDDLEKOOP
CORNELIUS	C446	SX			153	16.5			4			4			0			87			8.3			3.8			60.1			C446	CORNELIUS
FS	4710	SX			125	16.6			3			4			0			81			8.3			3.3			59.9			4710	FS
JACQUES	6770	SX		100	141	16.6	19.0		1	0		2	2		0	0		86	84		8.0	7.1		3.2	3.4		59.8	60.4		6770	JACQUES
CORNELIUS	C502	SX		103	134	16.7	18.9		0	1		1	1		1	1		82	82		8.3	7.0		3.3	3.3		59.8	60.4		C502	CORNELIUS
HUGHES	5510	SX	159	104	145	16.7	18.7	16.7	3	0	0	3	0	3	1	0	1	83	85	85	8.1	7.1	7.9	3.2	3.3	3.2	59.5	60.0	59.6	5510	HUGHES
ASGROW/O'S GOLD	RX578	SX			134	16.8			5			4			0			85			8.4			3.1			59.5			RX578	ASGROW/O'S GOLD
DEKALB	DK535	SX			136	16.8			19			6			0			80			7.7			3.5			60.6			DK535	DEKALB
GOLDEN HARVEST	H2486	SX	154	91	140	16.8	19.4	16.9	17	0	3	5	1	4	1	0	1	85	67	85	8.1	7.6	8.1	3.6	3.5	3.3	59.8	60.5	60.0	H2486	GOLDEN HARVEST
HENKEL	H160	SX			122	16.8			8			3			0			70			8.2			3.3			59.8			H160	HENKEL
TERRA	TR1040	SX	156	90	129	16.8	19.5	16.8	20	1	4	7	4	3	1	0	1	87	86	91	7.8	7.4	8.0	3.7	3.6	3.5	61.0	60.6	60.0	TR1040	TERRA
AMERICANA	3051	SX		95	146	16.9	22.8		4	0		3	1		0	0		84	79		7.6	7.2		3.4	3.6		60.4	60.6		3051	AMERICANA
ASGROW/O'S GOLD	RX626	SX			138	16.9			4			2			1			86			8.3			3.4			60.4			RX626	ASGROW/O'S GOLD
EK PREMIUM	EK7740	SX	149	89	111	16.9	20.3	17.2	14	1	3	12	4	3	1	0	1	71	80	85	8.1	7.5	8.1	3.3	3.7	3.5	59.6	60.5	60.2	EK7740	EK PREMIUM
LYNKS	2711	SX			150	16.9			5			4			0			76			7.7			3.3			60.1			2711	LYNKS
KRUGER	8109B	SX			156	17.0			2			4			0			85			7.6			3.5			60.4			8109B	KRUGER
MARK	MK90106	SX			129	17.0			4			5			0			86			8.1			3.2			60.0			MK90106	MARK
NORTHRUP KING	N6873	SX			141	17.0			4			5			0			84			7.6			3.3			60.0			N6873	NORTHRUP KING
*PIONEER	3475	SX	155	93	136	17.0	18.3	17.9	3	0	1	3	1	3	1	0	0	82	77	83	8.1	7.0	8.2	3.2	3.6	3.4	59.6	61.0	60.0	3475	*PIONEER
FS	6566	SX	150	89	129	17.1	20.4	17.6	16	0	5	7	3	4	0	1	1	85	83	84	8.0	7.3	8.2	3.5	3.6	3.6	60.3	60.7	60.2	6566	FS
OTTILIE	RO2445	SX			144	17.1			6			9			1			85			7.4			3.5			60.7			RO2445	OTTILIE
TRI VALLEY	108	SX			145	17.1			5			7			0			87			8.5			3.6			59.5			108	TRI VALLEY
AGRIPRO	AP525	SX			142	17.2			7			5			0			86			7.6			3.3			60.0			AP525	AGRIPRO
FONTANELLE	4435	SX			129	17.2			8			13			1			83			7.4			3.6			60.8			4435	FONTANELLE
HUGHES	5777	SX	165	89	147	17.2	23.1	19.3	9	1	3	6	2	2	0	0	0	80	78	89	7.4	7.1	8.5	3.5	3.8	3.4	60.6	61.1	59.6	5777	HUGHES
MCALLISTER	8908	SX			127	17.2			4			5			0			84			8.0			3.4			60.4			8908	MCALLISTER
SIEBEN	32XS	SX		100	141	17.2	22.2		4	1		9	2		1	0		86	78		8.0	7.7		3.5	3.5		60.3	60.3		32XS	SIEBEN
CORNELIUS	C601	SX		103	156	17.3	22.4		3	1		6	1		1	0		89	80		7.3	7.0		3.6	3.5		60.9	60.5		C601	CORNELIUS
GOLDEN HARVEST	H2525	SX		99	145	17.3	23.9		13	0		8	1		1	0		86	84		7.4	7.1		3.5	3.5		60.5	60.5		H2525	GOLDEN HARVEST
MIDDLEKOOP	M450	SX		93	141	17.3	22.2		6	1		8	2		0	0		83	85		7.8	7.1		3.5	3.6		60.4	61.0		M450	MIDDLEKOOP
PIONEER	3379	SX		111	146	17.3	23.6		14	0		3	1		0	0		85	81		7.8	7.3		3.5	3.5		60.2	60.6		3379	PIONEER
S BRAND	SS57A	SX			138	17.3			0			3			1			76			7.7			3.6			60.5			SS57A	S BRAND
DEKALB	DK584	SX			144	17.4			5			3			0			83			8.8			3.2			59.4			DK584	DEKALB
IOWA STATE	112	SX	162	95	120	17.4	22.0	17.1	5	1	1	4	5	4	0	0	0	79	83	85	7.7	7.3	7.8	3.3	3.7	3.4	60.1	60.9	60.5	112	IOWA STATE
CARGILL	6527	SX		100	136	17.5	20.5		7	1		7	4		1	0		87	82		8.6	7.4		3.2	3.5		59.6	60.2		6527	CARGILL
HAWKEYE HYBRID	SX49	SX		95	140	17.5	24.0		0	1		5	1		1	1		83	84		7.7	7.3		3.1	3.5		59.8	60.8		SX49	HAWKEYE HYBRID
RENZE	6338	SX		103	144	17.5	23.4		8	1		6	1		0	0		87	82		7.6	7.2		3.4	3.6		60.3	60.6		6338	RENZE
SIEBEN	25XS	SX		95	145	17.5	22.3		3	2		6	2		0	0		81	83		7.6	7.2		3.5	3.6		60.7	60.9		25XS	SIEBEN
BOJAC	5204	SX			142	17.5			6			6			0			87			7.7			3.7			60.4			5204	BOJAC
CORNELIUS	C612A	SX			137	17.6			6			5			0			87			7.7			3.7			60.7			C612A	CORNELIUS
GREAT LAKES	GL582	SX			145	17.6			5			3			0			80			7.6			3.4			60.5			GL582	GREAT LAKES
HAWKEYE HYBRID	SX65	SX			147	17.6			5			3			0			89			7.9			3.6			60.7			SX65	HAWKEYE HYBRID
HENKEL	H175	SX			151	17.6			2			7			1			88			7.5			3.5			60.5			H175	HENKEL
MCALLISTER	9009	SX			142	17.6			3			3			0			85			7.7			3.4			60.3			9009	MCALLISTER
MIDDLEKOOP	M585	SX			145	17.6			7			4			0			89			8.2			3.7			60.2			M585	MIDDLEKOOP
PAYCO	SX800	SX		104	138	17.6	20.5		3	1		6	3		1	0		76	81		8.1	7.5		3.5	3.6		59.7	60.5		SX800	PAYCO
PIONEER	3362	SX			151	17.6			2			2			0			80			7.6			3.5			60.3			3362	PIONEER
PIONEER	3467	SX			126	17.6			10			7			0			81			7.7			3.2			59.6			3467	PIONEER
SUPERCROST	4366	MSX		101	136	17.6	21.7		14	1		3	2		1	0		88	86		8.2	7.6		3.5	3.6		60.2	60.4		4366	SUPERCROST
TERRA	TR1125	SX		100	139	17.6	22.1		11	0		3	1		0	0		84	86		8.4	7.6		3.6	3.5		60.4	60.3		TR1125	TERRA
CARGILL	6927	SX		97	153	17.7	22.0		6	0		4	0		0	1		84	87		8.1	7.1		3.6	3.5		60.5	60.7		6927	CARGILL
FS	6621	SX	149	96	142	17.7	20.6	17.8	1	1	1	6	2	3	0	1	0	86	77	76	8.4	7.5	8.8	3.6	3.6	3.3	60.2	60.6	59.2	6621	FS
OTTILIE	RO2465	SX	170	106	146	17.7	21.9	19.1	6	0	2	0	1	3	0	1	0	84	88	88	8.3	7.5	8.5	3.7	3.6	3.3	60.5	60.6	59.6	RO2465	OTTILIE
TERRA	TR1060	SX	151	95	127	17.7	20.6	18.1	6	1	3	9	2	4	0	0	1	85	81	84	8.3	7.4	8.3	3.7	3.6	3.6	60.6	60.4	60.2	TR1060	TERRA
CARGILL	6227	SX			139	17.8			6			9			1			86			7.8			3.3			59.8			6227	CARGILL
COOP	2244	SX			148	17.8			7			3			1			83			8.2			3.6			60.4			2244	COOP
DEKALB	DK612	SX			147	17.8			4			2			0			83			8.4			3.5			60.4			DK612	DEKALB
FONTANELLE	4535	SX			135	17.8			6			6			0			86			8.3			3.6			60.9			4535	FONTANELLE
HENKEL	H185	SX			149	17.8			2			2			0			84			8.5			3.6			60.2			H185	HENKEL
HUGHES	5870	SX	167	103	137	17.8	22.3	19.0	12	0	2	3	0	2	0	0	0	84	81	87	8.5	7.9	8.5	3.6	3.7	3.5	59.8	60.5	60.2	5870	HUGHES
IOWA STATE	110	SX			136	17.8			3			4			0			80			7.5			3.4			60.6			110	IOWA STATE
SUPERIOR	SP5908	SX			149	17.8			6			4			0			88			7.9			3.4			60.5			SP5908	SUPERIOR
*ASGROW/O'S GOLD	6882	SX	166	93	133	17.9	22.4	18.2	3	2	3	9	2	3	1	0	2	85	83	87	8.2	6.9	7.7	3.4	3.6	3.5	60.2	60.9	60.3	6882	*ASGROW/O'S GOLD
PFISTER	3000	SX			141	17.9			2			4			0			80			8.2			3.7			60.8			3000	PFISTER
AMERICANA	3060	SX	147	101	153	18.0	21.7	18.1	5	0	1	3	0	3	0	1	0	87	86	81	8.4	7.8	8.4	3.6	3.6	3.6	60.3	60.4	59.8	3060	AMERICANA
*CROWS	488	SX	167	105	140	18.0	21.1	17.7	9	1	5	6	3	4	1	1	0	81	83	90	7.4	7.4	7.7	3.4	3.7	3.5	60.3	60.8	60.1	488	*CROWS
MCCURDY	6660	SX		90	143	18.0	21.5		5	0		2	1		0	1		80	87		8.3	8.1		3.6	3.6		60.3	60.3		6660	MCCURDY
NORTHRUP KING	S6596	SX		102	143	18.0	23.7		5	3		6	2		1	0		83	86		8.0	7.3		3.4	3.6		60.2	60.6		S6596	NORTHRUP KING
S BRAND	CB1140	SXB			136	18.0			1			2			1			73			7.8			3.4			60.1			CB1140	S BRAND
SUPERCROST	4386	SX	173	100	153	18.0	22.4	19.2	9	0	1	3	0	2	0	0	0	91	85	89	8.3	7.4	8.2	3.8	3.6	3.6	61.0	60.5	60.5	4386	SUPERCROST
TRI VALLEY	110	SX			126	18.0			4			7			0			85			8.0			3.6			60.5			110	TRI VALLEY
UTHOFF	U46	SX		101	155	18.0	22.2		3	0		1	1		0	1		87	82		8.1	7.4		3.7	3.7		60.5	60.7		U46	UTHOFF
CROWS	482	SX	166	91	126	18.1	22.1	18.2	5	0	3	5	3	3	0	0	0	75	75	85	7.7	7.3	7.8	3.7	3.6	3.5	60.8	60.5	60.0	482	CROWS
MCALLISTER	8611	SX	169	107	145	18.1	21.5	18.7	3	0	0	1	1	2	0	0	0	80	86	86	8.6	7.3	8.5	3.5	3.6	3.5	60.3	60.6	59.7	8611	MCALLISTER
*PIONEER	3343	SX		109	139	18.1	23.9		9	2		9	2		0	1		82	79		8.2	7.1		3.5	3.7		60.0	60.9		3343	*PIONEER
RANDELL	7110	SX			138	18.1			5			9			1			73			8.5			3.5			60.0			7110	RANDELL
AGRIGENE	AG6450	SX			149	18.2			7			3			0			86			8.4			3.6			60.6			AG6450	AGRIGENE
AGRIPRO	AP595	SX		97	147	18.2	22.2		12	0		2	1		0	0		90	89		8.5	7.3		3.3	3.6		59.5	60.7		AP595	AGRIPRO
BOJAC	454	SX	172	104	147	18.2	21.9	18.9	10	0	1	3	0	3	0	1	0	85	88	87	8.5	7.4	8.4	3.5	3.6	3.5	60.1	60.7	60.3	454	BOJAC
CORNELIUS	C612	SX	163	104	136	18.2	22.7	18.8	4	0	3	3	1	2	1	1	0	85	85	89	8.4	7.7	8.4	3.5	3.6	3.4	60.7	60.8	60.4	C612	CORNELIUS
*DEKALB	T1100	SX	167	90	143	18.2	22.1	17.8	4	2	2	8	1	4	0	0	1	80	79	88	7.8	7.2	7.9	3.5	3.7	3.4	60.3	60.8	60.0	T1100	*DEKALB
GOLDEN HARVEST	H2532	SX		106	147	18.2	21.5		16	3		10	3		1	0		89	85		7.6	7.4		3.3	3.5		60.1	60.7		H2532	GOLDEN HARVEST
MARK	MK88109	SX	174	94	138	18.2	21.8	18.9	7	0	1	1	0	1	0	0	0	78	85	85	8.3	7.7	8.3	3.6	3.5	3.5	60.1	60.3	59.8	MK88109	MARK
MARK	MK88114	SX			147	18.2			7			5			0			81			7.8			3.4			60.0			MK88114	MARK
RENZE	G346	SX			132	18.2			5			6			1			84			7.6			3.5			60.8			G346	RENZE
STURDY GROW	618A	SX			154	18.2			10			6			0			86			8.3			3.7			60.8			618A	STURDY GROW
SU CROS CO	109	SX	174	106	147	18.2	22.3	19.0	6	0	1	2	0	1	0	0	0	88	85	89	8.1	7.5	8.1	3.6	3.6	3.6	60.6	60.5	60.3	109	SU CROS CO
DAIRYLAND	DX1014	SX		103	136	18.3	22.5		3	0		3	0		0	0	0	78	84		8.2	7.6		3.5	3.6		60.0	60.7		DX1014	DAIRYLAND
FS	6595	SX			144	18.3			7			4			0			83			7.5			3.4			60.4			6595	FS
*GARST	8518	SX			148	18.3			11			5			1			86			8.5			3.7			60.9			8518	*GARST
HAWKEYE HYBRID	SX43	SX	171	101	148	18.3	22.4	19.2	9	0	1	3	1	4	0	0	0	86	86	89	8.4	7.4	8.4	3.7	3.6	3.4	60.6	60.7	59.9	SX43	HAWKEYE HYBRID
LEWIS	4685	SX	166	102	147	18.3	22.1	19.2	12	0	2	2	1	3	0	0	0	88	84	84	8.5	7.9	8.4	3.5	3.6	3.5	60.7	60.2	60.1	4685	LEWIS
NORTHRUP KING	N6348	SX		99	137	18.3	21.5		2	1		8	1		1	0	0	83	78		7.5	7.1		3.4	3.5		60.2	60.9		N6348	NORTHRUP KING
*PIONEER	3377	SX	160	103	134	18.3	21.8	18.7	20	1	8	14	5	4	0	0	0	77	82	83	7.8	7.1	7.6	3.4	3.6	3.6	60.3	60.6	60.4	3377	*PIONEER
SHISSLER	GR8-173	SX			143	18.3			1			3			1			84			7.9			3.4			60.0			GR8-173	SHISSLER
SHISSLER	GR8-179	SX			149	18.3			11			4			0			85			8.4			3.3			59.5			GR8-179	SHISSLER
AMES BEST	SX16	SX		92	142	18.4	22.5		10	1		3	1		0	1		84	87		8.2	8.1		3.4	3.7		59.8	60.5		SX16	AMES BEST
FS	6774	SX		100	142	18.4	21.8		6	0		4	1		0	1		81	83		8.3	7.7		3.3	3.6		59.8	60.2		6774	FS
*GARST	8536	SX		100	144	18.4	22.8		6	1		4	0		0	1		85	84		8.2	7.6		3.6	3.6		60.7	60.7		8536	*GARST
GOLDEN HARVEST	H2540	SX	166	103	145	18.4	21.8	18.8	7	0	1	3	2	3	0	1	0	89	85	86	8.5	7.3	8.1	3.5	3.5	3.5	60.2	60.3	59.8	H2540	GOLDEN HARVEST
KRUGER	8111A	SX		104	148	18.4	22.2		9	0		5	0		0	0		84	84		8.6	7.3		3.5	3.7		60.3	61.1		8111A	KRUGER
RENZE	6352	SX		89	148	18.4	22.5		7	0		4	1		0	2		86	86		8.2	7.8		3.6	3.6		60.3	60.3		6352	RENZE
SIEBEN	42XS	SX		114	137	18.4	23.8		4	1		6	0		1	1		81	86		8.7	8.2		3.5	3.5		60.3	59.9		42XS	SIEBEN
WYFFELS	W670	SX	167	98	148	18.4	22.2	18.8	9	0	0	3	1	2	1	1	0	86	84	84	7.9	7.4	8.5	3.8	3.6	3.5	60.7	60.8	60.1	W670	WYFFELS
ASGROW/O'S GOLD	RX746	SX		105	144	18.5	20.8		5	2		4	1		0	0		86	88		8.5	7.8		3.5	3.5		60.1	60.1		RX746	ASGROW/O'S GOLD
*GARST	8532	SX		103	148	18.5	21.7		4	1		3	1		0	0		88	86		8.5	7.3		3.6	3.6		60.1	60.7		8532	*GARST
HUGHES	5919	SX			157	18.5			3			3			0			81			8.5			3.5			60.0			5919	HUGHES
PIONEER	3344	SX			126	18.5			25			16			1			84			7.6			3.2			60.1			3344	PIONEER
RENZE	6341	SX			148	18.5			5			9			0			86			8.2			3.6			60.5			6341	RENZE
RENZE	G354	SX	159	96	151	18.5	22.4	19.5	11	0	4	2	1	3	0	0	0	89	88	87	8.6	7.4	8.3	3.6	3.6	3.4	60.4	60.7	59.3	6354	RENZE
TRI VALLEY	114	SX		91	140	18.5	23.3		6	0		4	1		0	0		90	83		8.4	7.3		3.5	3.5		60.2	60.6		114	TRI VALLEY
WILSON	1640	SX	164	104	141	18.5	22.8	18.7	5	1	0	2	0	3	0	1	0	87	88	91	8.3	7.4	8.5	3.5	3.7	3.4	60.2	60.9	59.8	1640	WILSON
FUNK	G4485	SX		95	139	18.6	22.4		13	0		2	1		0	1		85	83		8.3	7.8		3.5	3.6		59.9	60.5		G4485	FUNK
MCALLISTER	8310	SX	166	104	142	18.6	25.0	19.7	1	2	2	4	2	3	1	0	0	78	82	88	8.3	7.8	8.0	3.4	3.7	3.5	60.2	60.8	60.5	8310	MCALLISTER
RANDELL	7112	SX			148	18.6			7			3			0			79			8.0			3.5			60.2			7112	RANDELL
S BRAND	SS62B	SXB	169	100	139	18.6	24.4	18.9	6	1	3	5	1	4	0	0	0	77	79	89	8.2	7.6	8.0	3.4	3.7	3.5	60.4	61.0	60.1	SS62B	S BRAND
CROWS	682	SX		107	124	18.7	25.9		11	1		11	2		1	0		72	77		7.8	7.4		3.5	3.5		60.4	60.3		682	CROWS
FONTANELLE	4280	SX	165	101	145	18.7	22.2	19.3	9	2	3	3	1	2	0	0	0	88	84	87	8.4	7.8	8.4	3.8	3.8	3.6	61.0	60.9	60.4	4280	FONTANELLE
GRUHN HYBRID	SX6A	SX		94	130	18.7	23.9		3	2		6	4		0	0		80	81		8.1	7.3		3.5	3.5		59.9	59.9		SX6A	GRUHN HYBRID
JACQUES	7770	SX		96	140	18.7	22.1		12	0		4	1		0	0		86	84		8.1	7.8		3.6	3.5		59.5	60.2		7770	JACQUES
LYNKS	DS432	SX	169	100	138	18.7	22.5	19.3	11	0	2	3	0	3	0	0	0	85	85	84	8.1	7.4	8.4	3.5	3.7	3.6	60.1	60.9	60.1	DS432	LYNKS
MARK	MK90108	SX			148	18.7			14			3			0			84			8.4			3.9			60.9			MK90108	MAR

TABLE 2. AVERAGES OF 1988-89 AND 1987-89 OF VARIETIES
TESTED IN DISTRICT 5 . LSD FOR YIELDS ARE 7 BUSHELS
FOR 87-89 AND 9 BUSHELS FOR 88-89.

			YIELD BU/A		MOISTURE PCT		ROOT LDG PCT		STALK LDG PCT		DROP EAR PCT		STAND PCT	
BRAND	VARIETY	CROSS	87-89	88-89	88-89	87-89	87-89	88-89	87-89	88-89	87-89	88-89	87-89	88-89
MIDDLEKOOP	M622	MSX	114	97	17.3	17.0	8	12	4	4	0	0	87	87
*PIONEER	3475	SX	128	115	17.6	17.7	1	2	2	2	0	1	80	79
HUGHES	5510	SX	136	124	17.7	17.4	1	2	2	2	0	0	84	84
CORNELIUS	C502	SX		119	17.8			0		1		1		83
JACQUES	6770	SX		120	17.8			0		2		0		85
GOLDEN HARVEST	H2486	SX	128	115	18.1	17.7	7	9	3	3	0	0	79	76
TERRA	TR1040	SX	125	109	18.1	17.7	8	10	5	6	1	1	88	86
EK PREMIUM	EK7740	SX	116	100	18.6	18.1	6	8	6	8	1	1	79	75
FS	6566	SX	122	109	18.7	18.4	7	8	5	5	1	0	84	84
CARGILL	6527	SX		118	19.0			4		5		0		84
PAYCO	SX800	SX		121	19.0			2		5		1		79
FS	6621	SX	129	119	19.1	18.7	1	2	3	4	0	0	80	82
TERRA	TR1060	SX	124	111	19.1	18.8	3	3	5	5	0	0	83	83
*CROWS	488	SX	137	122	19.5	18.9	5	5	4	4	1	1	85	82
ASGROW/O'S GOLD	RX746	SX		124	19.6			3		3		0		87
SUPERCROST	4366	MSX		118	19.6			7		2		0		87
IOWA STATE	112	SX	126	108	19.7	18.8	2	3	4	4	0	0	82	81
SIEBEN	32XS	SX		121	19.7			3		5		0		82
MIDDLEKOOP	M450	SX		117	19.7			3		5		0		84
MCCURDY	6660	SX		117	19.8			5		1		0		83
MCALLISTER	8611	SX	140	126	19.8	19.4	1	2	1	1	0	0	84	83
OTTILIE	R02465	SX	140	126	19.8	19.6	3	3	1	0	0	0	87	86
AMERICANA	3051	SX		121	19.8			2		2		0		82
AMERICANA	3060	SX	134	127	19.8	19.3	2	2	2	2	0	0	84	86
CARGILL	6927	SX		125	19.8			3		2		0		85
CORNELIUS	C601	SX		129	19.8			2		3		0		84
GOLDEN HARVEST	H2532	SX		126	19.8			9		7		1		87
TERRA	TR1125	SX		119	19.8			5		2		0		85
NORTHRUP KING	N6348	SX		118	19.9			1		5		0		81
SIEBEN	25XS	SX		120	19.9			3		4		0		82
WILSON	1670	SX		123	19.9			7		9		1		82
MARK	MK88109	SX	136	116	20.0	19.6	3	4	1	1	0	0	83	81
BOJAC	454	SX	141	125	20.0	19.7	4	5	2	2	0	1	86	86
HUGHES	5870	SX	136	120	20.0	19.7	5	6	2	1	0	0	84	83
*PIONEER	3377	SX	132	119	20.0	19.6	10	11	7	9	0	0	80	79
CROWS	482	SX	127	108	20.1	19.5	3	2	4	4	0	0	78	75
FS	6774	SX		121	20.1			3		2		0		87
*GARST	8532	SX		126	20.1			2		2		0		87
GOLDEN HARVEST	H2540	SX	138	124	20.1	19.7	3	3	3	2	0	1	86	87
UTHOFF	U46	SX		128	20.1			2		1		0		84
*ASGROW/O'S GOLD	6882	SX	131	113	20.1	19.5	3	3	4	5	1	0	85	84
HUGHES	5777	SX	134	118	20.1	19.9	4	5	3	4	0	0	83	79
LEWIS	4685	SX	138	124	20.2	19.9	5	6	2	2	0	0	85	86
AGRIPRO	AP595	SX		122	20.2			6		1		0		89
SUPERCROST	4386	SX	142	126	20.2	19.9	3	5	2	2	0	0	88	88
SU CROS CO	109	SX	142	126	20.2	19.8	3	3	1	1	0	0	87	87
KRUGER	8111A	SX		126	20.3			5		3		0		84
WYFFELS	W670	SX	137	123	20.3	19.8	3	5	2	2	1	1	85	85
HAWKEYE HYBRID	SX43	SX	140	124	20.3	20.0	3	4	2	2	0	0	87	86
DAIRYLAND	DX1014	SX		119	20.4			1		2		0		81
JACQUES	7770	SX		118	20.4			6		2		0		85
PIONEER	3379	SX		128	20.4			7		2		0		83
AMES BEST	SX16	SX		117	20.4			5		2		1		85
CORNELIUS	C612	SX	134	120	20.4	19.9	4	4	2	2	1	1	87	88
*DEKALB	T1100	SX	133	116	20.4	19.6	3	4	4	4	0	0	82	80
FONTANELLE	4280	SX	137	123	20.4	20.1	5	5	2	2	0	0	87	86
RENZE	6338	SX		123	20.4			4		3		0		84
RENZE	6352	SX		118	20.4			3		0		1		86
RENZE	6354	SX	135	123	20.4	20.1	5	6	2	2	0	0	88	88
FUNK	G4485	SX		117	20.5			6		1		0		84
SIEBEN	37XS	SX	132	116	20.5	19.9	4	3	2	2	0	1	87	86
*GARST	8536	SX		122	20.6			3		2		0		84
GOLDEN HARVEST	H2525	SX		122	20.6			7		4		0		85
LYNKS	DS432	SX	135	119	20.6	20.2	4	6	2	2	0	0	85	85
WILSON	1640	SX	136	122	20.6	20.0	2	3	2	1	0	0	89	88
MIDDLEKOOP	M582	SX	135	121	20.7	20.5	4	5	2	2	0	0	87	88
HAWKEYE HYBRID	SX49	SX		117	20.8			0		3		1		84
NORTHRUP KING	N6560	SX		126	20.8			6		1		0		87
NORTHRUP KING	S6596	SX		123	20.8			4		4		1		84
TRI VALLEY	114	SX		115	20.9			3		3		0		86
*PIONEER	3343	SX		124	21.0			5		5		0		81
MCALLISTER	8009A	SX	134	117	21.1	20.6	1	1	3	3	1	1	85	83
SIEBEN	42XS	SX		126	21.1			2		3		1		83
STURDY GROW	826	SX		125	21.1			3		3		0		84
GRUHN HYBRID	SX6A	SX		112	21.3			8		5		0		80
S BRAND	SS62A	SX	133	121	21.3	20.4	2	1	7	1	0	0	82	81
DAIRYLAND	DX1018	SX		119	21.4			3		3		0		79
EK PREMIUM	EK8805	SX	131	116	21.5	20.6	8	9	5	6	0	0	84	83
S BRAND	SS62B	SXB	136	119	21.5	20.6	3	3	3	3	0	0	81	78
PFISTER	2995	SX		122	21.5			5		5		0		82
CARGILL	7877	SX	144	127	21.6	20.8	14	16	4	4	0	0	84	83
MCALLISTER	8310	SX	138	123	21.8	21.1	1	1	3	3	0	0	83	80
EK PREMIUM	EK7796	SX	139	124	21.8	21.0	1	1	2	2	1	0	76	72
WILSON	1700B	SX		118	21.9			2		3		0		81
AMES BEST	SX19AA	SX		126	22.0			7		3		1		89
*NORTHRUP KING	S7751	SX	142	127	22.0	21.3	5	6	2	2	0	0	88	86
*AGRIPRO	AP510	SX	134	122	22.1	21.3	5	7	3	3	1	1	87	87
*DEKALB	DK636	SX	137	121	22.1	21.2	5	7	3	3	1	1	85	83
JACQUES	8210	SX		132	22.1			9		2		1		84
*NORTHRUP KING	PX9540	SX	134	122	22.1	21.4	6	7	3	3	0	0	86	87
S BRAND	SS63B	SX	139	124	22.1	21.5	6	8	2	2	0	0	82	81
LEWIS	5650	SX	140	124	22.2	21.4	4	5	4	3	0	0	85	84
MCALLISTER	8408	SX	137	122	22.2	21.2	3	4	3	2	0	0	82	79
NC+	5891	SX	134	118	22.2	21.2	6	8	3	4	1	1	83	83
AMES BEST	SX18	SX		122	22.2			6		3		1		87
DAIRYLAND	DX1015	SX	134	119	22.2	21.5	3	4	4	4	0	0	85	83
NC+	5990	SX	125	108	22.2	21.3	2	3	3	4	0	0	82	80
NORTHRUP KING	7705	SX	135	121	22.2	21.2	7	9	3	3	0	0	86	85
*ASGROW/O'S GOLD	RX788	SX	141	126	22.3	21.3	5	7	2	2	0	0	84	85
CROWS	682	SX		115	22.3			6		6		0		74
FONTANELLE	5230	SX	136	118	22.3	21.3	2	3	3	3	0	0	85	84
GOLDEN HARVEST	H2572	SX	140	125	22.3	21.6	4	4	3	2	0	0	84	82
KRUGER	8112	SX	136	125	22.3	21.5	2	3	2	3	0	0	83	83
PAYCO	SX925	SX	140	127	22.3	21.5	5	6	3	3	0	1	86	86
RENZE	6412	SX	139	121	22.3	21.3	7	9	3	4	0	0	86	85
SHISSLER	GR8-186	SX	138	124	22.3	21.6	3	4	3	4	0	0	83	84
SU CROS CO	113	SX	143	127	22.3	21.3	3	4	5	5	0	0	87	85
AMERICANA	3600	SX	137	121	22.3	21.5	3	2	3	3	1	1	84	83
GARST	8344	SX	133	120	22.3	21.4	7	9	4	5	0	0	87	88
CORNELIUS	C72SX	SX	139	125	22.4	21.5	4	6	4	4	0	0	85	83
FUNK	G4513	SX		126	22.4			5		3		0		87
AGRIGENE	AG7400	SX	134	119	22.5	21.7	4	5	4	4	0	0	85	86
AMERICANA	4040	MSX	135	120	22.5	21.5	8	10	4	3	0	0	81	78
BOJAC	602	SX	135	120	22.6	21.7	4	6	3	2	0	0	85	84
FS	6933	SX	137	118	22.6	21.7	3	4	3	3	1	1	84	82
*MIDDLEKOOP	M451	SX	144	128	22.6	21.6	5	6	3	3	0	0	87	87
SUPERCROST	5415	SX	140	126	22.6	21.6	5	7	3	3	0	0	88	88
CARGILL	7993	SX	138	120	22.6	21.6	5	6	5	5	0	0	85	84
CROWS	647	SX		115	22.6			7		5		0		85
JACQUES	7820	SX	137	120	22.6	21.7	4	4	6	7	0	0	87	87
SIEBEN	43XS	SX	145	127	22.6	21.6	3	3	2	2	1	1	84	80
SUPERCROST	5460	SX	131	115	22.6	21.8	6	7	4	5	0	0	84	82
MCCURDY	7277	SX	134	118	22.7	21.7	5	6	4	4	0	0	84	82
TERRA	TR1120	SX	140	128	22.7	21.8	5	6	2	2	0	0	87	86
WYFFELS	W818	SX		121	22.7			9		4		0		85
OTTILIE	R02660	SX		121	22.8			6		12		4		83
SIEBEN	49XS	SX		122	22.8			6		3		0		85
UTHOFF	U37	SX	141	126	22.8	21.8	6	8	2	2	1	0	84	83
OTTILIE	R02480	SX	135	117	22.9	21.8	3	4	3	3	0	1	83	80
TRI VALLEY	115	SX	128	110	22.9	22.2	9	11	7	8	1	1	82	81
WILSON	2100	SX	138	121	22.9	21.8	7	10	2	2	0	0	87	87
GRUHN HYBRID	SX8A	SX		117	23.2			11		5		1		80
OTTILIE	R02490	SX		114	23.2			2		11		1		84
TERRA	TR3400	SX	135	120	23.3	22.3	6	7	5	5	1	1	84	84
AVERAGE OF ALL ENTRIES			135.1	120.5	20.5	21.0	4.4	5.0	3.2	3.3	0.3	0.4	84.4	83.6
AVERAGE OF WIDELY GROWN ENTRIES			135.9	121.6	20.3	20.9	4.8	5.3	3.5	3.7	0.4	0.4	84.5	83.6

SX = SINGLE CROSS. MSX = MODIFIED SINGLE CROSS. 3X = 3-WAY CROSS. 4X = 4-WAY CROSS. SXB = BLEND OF SINGLE CROSSES
* = WIDELY GROWN VARIETY ENTERED BY IOWA STATE UNIVERSITY